

JUN 19 REC'D

193226

SEARCH REQUEST FORM Scientific and Technical Information Center - EIC2800
Rev. 1/26/2006 This is an experimental format -- Please give suggestions or comments to Jeff Harrison, JEF-4B68, 22511.Date 6/16/06 Serial # 09/849,537 Priority Application Date 5/7/01Your Name M. Mims Examiner # _____AU 2829 Phone 202-1838 Room 5A30In what format would you like your results? Paper is the default. ☒ PAPER ☐ DISK ☐ EMAIL
If submitting more than one search request form, please prioritize the searches in order of need.

Where have you searched so far on this case?

Circle: USPT DWPI EPO-Abs JPO Abs IBM TDB Need before 6/22

What relevant art have you found so far? Please attach citations or Information Disclosure Statements.

What types of references would you like? Please checkmark:

Primary Refs ☒ Nonpatent Literature ☐ Teaching Refs ☐
Secondary Refs ☐ Foreign Patents ☐ Other ☐

Is this a "Fast & Focused Search" request? (Circle One) YES NO

A "Fast & Focused Search" is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2800 and on the STIC NPL Web Page at <http://uspto-a-patfr-2/siraapps/stic/npl/nplsearch.htm>

What is the topic, such as the novelty, motivation, utility, or other specific facets defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, registry numbers, definitions, structures, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract and pertinent claims.

Claims 13, 16, 17, 52-59 & 69-71Ball Grid Array
Heat SpreaderProblem: See pages 2 & 3
Solution: " " 3 & 4US 5,744,863 US 6,583,513

Staff Use Only

Searcher: M. MimsSearcher Phone: 25928Searcher Location: STIC-EIC2800, JEF-4B68Date Searcher Picked Up: 6/20/06Date Completed: 6/20/06Searcher Prep/Rev Time: 3:30Online Time: 37

Type of Search

Structure (#) ☐Bibliographic ☒Litigation ☐Fulltext ☐Patent Family ☐Other ☐

Vendors

STN ☒Dialog ☐Questel/Orbit ☐Lexis-Nexis ☐WWW/Internet ☐Other ☐

06/21/2006 09/849537 Lewis

=> d his full

(FILE 'HOME' ENTERED AT 16:19:17 ON 20 JUN 2006)

FILE 'CAPLUS' ENTERED AT 16:20:11 ON 20 JUN 2006

L1 1 SEA ABB=ON PLU=ON US20020171144/PN
D IBIB ABS IND

FILE 'WPIX' ENTERED AT 16:21:20 ON 20 JUN 2006

L2 1 SEA ABB=ON PLU=ON US20020171144/PN
D IFULL

FILE 'INSPEC' ENTERED AT 16:22:04 ON 20 JUN 2006

E HEAT SPREADER/CT
E CIRCUIT BOARD/CT
E CIRCUIT BOARDS/CT
E PRINTED CIRCUIT BOARDS/CT
E E3+ALL

L3 50740 SEA ABB=ON PLU=ON BALL LIMIT? METALLUR? OR BLM OR BGA OR
GRID ARRAY OR BUMP OR SOLDER(W) (BALL OR BUMP? OR PIN) OR
SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
OR DDC OR DIE CONTACT OR FLIP CHIP OR MCM OR MULTI CHIP
MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
PBGA OR C4
L4 329243 SEA ABB=ON PLU=ON ADHES? OR BOND? OR SEAL? OR ADHER? OR
RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE
L5 38694 SEA ABB=ON PLU=ON PRINT? CIRCUIT BOARD OR PCB OR PRINT?
CIRCUIT
L6 628 SEA ABB=ON PLU=ON HEAT SPREAD?
L7 1058 SEA ABB=ON PLU=ON STIFFENER?
L8 239914 SEA ABB=ON PLU=ON IC OR INTEGRAT? CIRCUIT?
L9 0 SEA ABB=ON PLU=ON L3 AND L4 AND L5 AND L6 AND L7 AND L8
L10 0 SEA ABB=ON PLU=ON L3 AND L4 AND L5 AND L6 AND L7
L11 18 SEA ABB=ON PLU=ON L3 AND L4 AND L5 AND L6 AND L8
L12 0 SEA ABB=ON PLU=ON RING AND L11
D L11 IALL 1-18

FILE 'WPIX' ENTERED AT 16:31:04 ON 20 JUN 2006

L13 93878 SEA ABB=ON PLU=ON BALL LIMIT? METALLUR? OR BLM OR BGA OR
GRID ARRAY OR BUMP OR SOLDER(W) (BALL OR BUMP? OR PIN) OR
SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
OR DDC OR DIE CONTACT OR FLIP CHIP OR MCM OR MULTI CHIP
MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
PBGA OR C4
L14 2238975 SEA ABB=ON PLU=ON ADHES? OR BOND? OR SEAL? OR ADHER? OR
RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE
L15 112050 SEA ABB=ON PLU=ON PRINT? CIRCUIT BOARD OR PCB OR PRINT?
CIRCUIT
L16 1391 SEA ABB=ON PLU=ON HEAT SPREAD?
L17 6275 SEA ABB=ON PLU=ON STIFFENER?
L18 319829 SEA ABB=ON PLU=ON IC OR INTEGRAT? CIRCUIT?
L19 25810 SEA ABB=ON PLU=ON STIFFEN?
L20 6 SEA ABB=ON PLU=ON L13 AND L14 AND L15 AND L16 AND L18 AND
L19
D IFULL 1-6

EIC 2800 MARY S. MIMS 272-5928

06/21/2006 09/849537 Lewis

FILE 'CAPLUS' ENTERED AT 16:41:02 ON 20 JUN 2006

L21 115591 SEA ABB=ON PLU=ON BALL LIMIT? METALLUR? OR BLM OR BGA OR
GRID ARRAY OR BUMP OR SOLDER(W) (BALL OR BUMP? OR PIN) OR
SOLDERBALL OR BOC OR BOARD(2A)CHIP OR FCBGA OR FCOB OR FPBGA
OR DDC OR DIE CONTACT OR FLIP CHIP OR MCM OR MULTI CHIP
MODULE OR LSI OR CSP OR CHIP SCALE OR PGA OR FR 4 OR FR4 OR
PBGA OR C4

L22 2946065 SEA ABB=ON PLU=ON ADHES? OR BOND? OR SEAL? OR ADHER? OR
RESIN? OR CURING OR CURED OR CURE OR VULCAN? OR POLYMERIZATION
OR POLYMERIZING OR HARDEN? OR ?EPOX? OR POLYCARBONATE

L23 71803 SEA ABB=ON PLU=ON PRINT? CIRCUIT BOARD OR PCB OR PRINT?
CIRCUIT

L24 883 SEA ABB=ON PLU=ON HEAT SPREAD?

L25 96140 SEA ABB=ON PLU=ON IC OR INTEGRAT? CIRCUIT?

L26 6372 SEA ABB=ON PLU=ON STIFFEN?

L27 1 SEA ABB=ON PLU=ON L21 AND L22 AND L23 AND L24 AND L25 AND
L26

L28 1 SEA ABB=ON PLU=ON L27 NOT L1
D IALL
D IBIB ABS
D IBIB ABS HITIND
E HEAT SPREADER/CT
E E1+ALL

L29 1 SEA ABB=ON PLU=ON L21 AND L22 AND L23 AND L25 AND L26

L30 0 SEA ABB=ON PLU=ON L29 NOT L28

L31 1830 SEA ABB=ON PLU=ON L21 AND L22 AND L23

L32 6 SEA ABB=ON PLU=ON L31 AND L26

L33 5 SEA ABB=ON PLU=ON L32 NOT (L1 OR L28)
D IBIB ABS HITIND 1-5